



PCT10

## RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/10/048,046

TIME: 07:44:32

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

ENTERED

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3 <110> APPLICANT: The Wistar Institute of Anatomy & Biology
4     Halazonetis, Thanos
5     Scolnick, Daniel
7 <120> TITLE OF INVENTION: Compositions and Methods to Enhance Sensitivity of
8     Cancer Cells to Mitotic Stress
10 <130> FILE REFERENCE: WST97APCT
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/048,046
C--> 13 <141> CURRENT FILING DATE: 2002-01-18
15 <150> PRIOR APPLICATION NUMBER: 60/146,194
16 <151> PRIOR FILING DATE: 1999-07-29
18 <160> NUMBER OF SEQ ID NOS: 32
20 <170> SOFTWARE: PatentIn Ver. 2.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 2679
24 <212> TYPE: DNA
25 <213> ORGANISM: Homo sapiens
27 <220> FEATURE:
28 <221> NAME/KEY: CDS
29 <222> LOCATION: (91)..(2082)
31 <400> SEQUENCE: 1
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34 gttcggcgcg ggcggggat gtgaatcccg atg gag cgg ccc gag gaa ggc aag 114
35                               Met Glu Arg Pro Glu Glu Gly Lys
36                               1                               5
38 cag tcg ccg ccg ccg cag ccc tgg gga cgg ctc ctg cgt ctg ggc gcg 162
39 Gln Ser Pro Pro Pro Gln Pro Trp Gly Arg Leu Leu Arg Leu Gly Ala
40     10                               15                               20
42 gag gag ggc gag ccg cac gtc ctc ctg agg aag cgg gag tgg acc atc 210
43 Glu Glu Gly Glu Pro His Val Leu Leu Arg Lys Arg Glu Trp Thr Ile
44     25                               30                               35                               40
46 ggg cgg aga cga ggt tgc gac ctt tcc ttc ccc agc aat aaa ctg gtc 258
47 Gly Arg Arg Arg Gly Cys Asp Leu Ser Phe Pro Ser Asn Lys Leu Val
48     45                               50                               55
50 tct gga gat cac tgt aga att gta gtg gat gaa aaa tca ggt cag gtg 306
51 Ser Gly Asp His Cys Arg Ile Val Val Asp Glu Lys Ser Glu Gln Val
52     60                               65                               70
54 aca ctg gaa gat acc agc acc agt gga aca gtg att aac aag ctg aag 354
55 Thr Leu Glu Asp Thr Ser Thr Gly Thr Val Ile Asn Lys Leu Lys
56     75                               80                               85
58 gtt gtt aag aag cag aca tgc cct tta cag act ggg gat gtc atc tac 402
59 Val Val Lys Lys Gln Thr Cys Pro Leu Gln Thr Gly Asp Val Ile Tyr
60     90                               95                               100
62 ttg gtg tac agg aag aat gaa ccg gaa cac aac gtg gca tac ctc tat 450

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63 Leu Val Tyr Arg Lys Asn Glu Pro Glu His Asn Val Ala Tyr Leu Tyr
64 105 110 115 120
66 gaa tct tta agt gaa aag caa ggc atg aca caa gaa tcc ttt gaa gct 498
67 Glu Ser Leu Ser Glu Lys Gln Gly Met Thr Gln Glu Ser Phe Glu Ala
68 125 130 135
70 aac aag gaa aat gtg ttc cat ggg acc aaa gat acc tca ggt gca ggt 546
71 Asn Lys Glu Asn Val Phe His Gly Thr Lys Asp Thr Ser Gly Ala Gly
72 140 145 150
74 gca ggg cga ggg gcc gat ccc cgg gtc cct ccg tgg tgg ccc gcc act 594
75 Ala Gly Arg Gly Ala Asp Pro Arg Val Pro Pro Ser Ser Pro Ala Thr
76 155 160 165
78 cag gtg tgc ttt gag gaa cca cag cca tca aca tgg acg tca gac ctc 642
79 Gln Val Cys Phe Glu Glu Pro Gln Pro Ser Thr Ser Thr Ser Asp Leu
80 170 175 180
82 ttc ccc aca gcc tgg gcc tct tcc acg gag cct tct cct gca ggg cga 690
83 Phe Pro Thr Ala Ser Ala Ser Ser Thr Glu Pro Ser Pro Ala Gly Arg
84 185 190 195 200
86 gag cgt tcc tcc agt tgt ggg tct ggg ggt ggc atc tcc cct aaa 738
87 Glu Arg Ser Ser Cys Gly Ser Gly Gly Gly Gly Ile Ser Pro Lys
88 205 210 215
90 gga agt ggt ccc tct gtg gca agt gat gaa gtc tcc agc ttt gcc tca 786
91 Gly Ser Gly Pro Ser Val Ala Ser Asp Glu Val Ser Ser Phe Ala Ser
92 220 225 230
94 gct ctc cca gac aga aag act gag tcc ttt tgg tgg ttg gaa ccc cag 834
95 Ala Leu Pro Asp Arg Lys Thr Ala Ser Phe Ser Ser Leu Glu Pro Gln
96 235 240 245
98 gat cag gag gat ttg gag ccc gtg aag aag aaa atg aga gga gat ggg 882
99 Asp Gln Glu Asp Leu Glu Pro Val Lys Lys Lys Met Arg Gly Asp Gly
100 250 255 260
102 gac ctt gac ctg aac ggg cag ttg ttg gtc gca caa ccg cgt aga aat 930
103 Asp Leu Asp Leu Asn Gly Gln Leu Leu Val Ala Gln Pro Arg Arg Asn
104 265 270 275 280
106 gcc caa acc gtc cac gag gac gtc aga gca gcg gct ggg aag cca gac 978
107 Ala Gln Thr Val His Glu Asp Val Arg Ala Ala Ala Gly Lys Pro Asp
108 285 290 295
110 aag atg gag gag acg ctg aca tgc atc atc tgc cag gac ctg ctg cac 1026
111 Lys Met Glu Glu Thr Leu Thr Cys Ile Ile Cys Gln Asp Leu Leu His
112 300 305 310
114 gac tgc gtg agt ttg cag ccc tgc atg cac acg ttc tgc gcg gct tgc 1074
115 Asp Cys Val Ser Leu Gln Pro Cys Met His Thr Phe Cys Ala Ala Cys
116 315 320 325
118 tac tgg ggc tgg atg gag cgc tgg tcc ctg tgt cct acc tgc cgc tgt 1122
119 Tyr Ser Gly Trp Met Glu Arg Ser Ser Leu Cys Pro Thr Cys Arg Cys
120 330 335 340
122 ccc gtg gag cgg atc tgt aaa aac cac atc ctc aac aac ctc gtg gaa 1170
123 Pro Val Glu Arg Ile Cys Lys Asn His Ile Leu Asn Asn Leu Val Glu
124 345 350 355 360
126 gca tac ctc atc cag cat cca gac aag agt cgc agt gaa gaa gat gtc 1218
127 Ala Tyr Leu Ile Gln His Pro Asp Lys Ser Arg Ser Glu Glu Asp Val

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## RAW SEQUENCE LISTING

REPORT APPLICATION: US/10/018,046

DATE: 02/13/2002

TIME: 10:14:02

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

128		365		370		375	
130	caa agt atg gat gcc agg aat aaa atc act caa gac atg ctg cag ccc						1266
131	Gln Ser Met Asp Ala Arg Asn Lys Ile Thr Gln Asp Met Leu Gln Pro						
132		380		385		390	
134	aaa gtc agg cgg tct ttt tct gat gaa gaa ggg agt tca gag gac ctg						1314
135	Lys Val Arg Arg Ser Phe Ser Asp Glu Glu Gly Ser Ser Glu Asp Leu						
136		395		400		405	
138	ctg gag ctg tca gac gtt gac agt gag tcc tca gac att agc cag cca						1362
139	Leu Glu Leu Ser Asp Val Asp Ser Glu Ser Ser Asp Ile Ser Gln Pro						
140		410		415		420	
142	tac gtc gtg tgc cgg cag tgt cct gag tac aga agg cag gcg gcg cag						1410
143	Tyr Val Val Cys Arg Gln Cys Pro Glu Tyr Arg Arg Gln Ala Ala Gln						
144	425		430		435		440
146	cct ccc cac tgc cca gca ccc gag ggc gag cca gga gcc cca cag gcc						1458
147	Pro Pro His Cys Pro Ala Pro Glu Gly Glu Pro Gly Ala Pro Gln Ala						
148		445		450		455	
150	ctg ggg gat gca ccc tcc acg tcc gtc agc ctg acg aca gca gtc cag						1506
151	Leu Gly Asp Ala Pro Ser Thr Ser Val Ser Leu Thr Thr Ala Val Gln						
152		460		465		470	
154	gat tac gtg tgc cct ctg caa gga agc cac gcc ctg tgc acc tgc tgc						1554
155	Asp Tyr Val Cys Pro Leu Gln Gly Ser His Ala Leu Cys Thr Cys Cys						
156		475		480		485	
158	ttc cag ccc atg ccc gac cgg aga gcg gag cgc gag cag gac ccg cgt						1602
159	Phe Gln Pro Met Pro Asp Arg Ala Glu Arg Glu Gln Asp Pro Arg						
160		490		495		500	
162	gtc gcc cct cag cag tgt gcg gtc tgc ctg cag cct ttc tgc cac ctg						1650
163	Val Ala Pro Gln Gln Cys Ala Val Cys Leu Gln Pro Phe Cys His Leu						
164	505		510		515		520
166	tac tgg ggc tgc acc cgg acc ggc tgc tac ggc tgc ctg gcc ccg ttt						1698
167	Tyr Trp Gly Cys Thr Arg Thr Gly Cys Tyr Gly Cys Leu Ala Pro Phe						
168		525		530		535	
170	tgt gag ctg aac ctg ggt gac aag tgt ctg gac ggc gtg ctg aac aac						1746
171	Cys Glu Leu Asn Leu Gly Asp Lys Cys Leu Asp Gly Val Leu Asn Asn						
172		540		545		550	
174	aac agc tac gag tca gac atc ctg aag aat tac ctg gca acc aga ggt						1794
175	Asn Ser Tyr Glu Ser Asp Ile Leu Lys Asn Tyr Leu Ala Thr Arg Gly						
176		555		560		565	
178	ttg aca tgg aaa aac atg ttg acc gag agc ctg gtg gct ctg cag cgg						1842
179	Leu Thr Trp Lys Asn Met Leu Thr Glu Ser Leu Val Ala Leu Gln Arg						
180		570		575		580	
182	gga gtg ttt ctg ctg tct gat tac aga gtc acg gga gac acc gtt ctg						1890
183	Gly Val Phe Leu Leu Ser Asp Tyr Arg Val Thr Gly Asp Thr Val Leu						
184	585		590		595		600
186	tgt tac tgc tgt gcc ctg cgc agc ttc cgt gac ctg acc tat cag tat						1938
187	Cys Tyr Cys Cys Gly Leu Arg Ser Phe Arg Glu Leu Thr Tyr Gln Tyr						
188		605		610		615	
190	cgg cag aac att cct gct tcc gag ttg cca gtg gcc gta aca tcc cgt						1986
191	Arg Gln Asn Ile Pro Ala Ser Glu Leu Pro Val Ala Val Thr Ser Arg						
192		620		625		630	

## RAW SEQUENCE LISTING

DATE: 02/13/2002

SUBJECT APPLICATION: US/10/048,046

TIME: 07:11:52

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

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194 cct gac tgc tac tgg ggc cgt aac tgc cgc act cag gtg aaa gct cac 2034
195 Pro Asp Cys Tyr Trp Gly Arg Asn Cys Arg Thr Gln Val Lys Ala His
196      635      640      645
198 cac gcc atg aaa ttc aat cat atc tgt gaa cag aca agg ttc aaa aac 2082
199 His Ala Met Lys Phe Asn His Ile Cys Glu Gln Thr Arg Phe Lys Asn
200      650      655      660
202 taagcatcca gaggccctga gcagcttttca gcaactggagg tgaagagagc gtgttttttaa 2142
204 aatacagaga caagcacgtc aagggtgtttt cacagccccc tgagggaagg gacgcagggt 2202
206 ctccgacagg tgcctctgggg tgaactcttct gtggagcttt ttacctctctg agtgagaccc 2262
208 tccccagagc cccggggggcc gcagcccccgc ctctctgtga gcctctgggca qggctcgtgg 2322
210 ttgcatcagc agcagagacg aagccttttct gtaacatgag gccgtccccc cgagaggggc 2382
212 agttttgctc ttttgtacat ttccgaaac tacagttaaa gcagaagtct gttttcagga 2442
214 aaagtttcaa gggagaaggg caagttttatc aaaaacattg tttcaggaga agggagcata 2502
216 agtttacagc ctacaggacg tacacaatat cctgctgctg ggaaaaccac agcattttat 2562
218 ctatttttta ttttaatagg ttgtgtgott atctttctaat aagattttaa tgtcacaaac 2622
220 tgtagcacia ataataataat ttataattta caaattgaca aaaaaaaaaa aaaaaaa 2679
223 <210> SEQ ID NO: 2
224 <211> LENGTH: 664
225 <212> TYPE: PRT
226 <213> ORGANISM: Homo sapiens
228 <400> SEQUENCE: 2
229 Met Glu Arg Pro Glu Glu Gly Lys Gln Ser Pro Pro Pro Gln Pro Trp
230 1 5 10 15
232 Gly Arg Leu Leu Arg Leu Gly Ala Glu Glu Gly Glu Pro His Val Leu
233 20 25 30
235 Leu Arg Lys Arg Glu Trp Thr Ile Gly Arg Arg Arg Gly Cys Asp Leu
236 35 40 45
238 Ser Phe Pro Ser Asn Lys Leu Val Ser Gly Asp His Cys Arg Ile Val
239 50 55 60
241 Val Asp Glu Lys Ser Gly Gln Val Thr Leu Glu Asp Thr Ser Thr Ser
242 65 70 75 80
244 Gly Thr Val Ile Asn Lys Leu Lys Val Val Lys Lys Gln Thr Cys Pro
245 85 90 95
247 Leu Gln Thr Gly Asp Val Ile Tyr Leu Val Tyr Arg Lys Asn Glu Pro
248 100 105 110
250 Glu His Asn Val Ala Tyr Leu Tyr Glu Ser Leu Ser Glu Lys Gln Gly
251 115 120 125
253 Met Thr Gln Glu Ser Phe Glu Ala Asn Lys Glu Asn Val Phe His Gly
254 130 135 140
256 Thr Lys Asp Thr Ser Gly Ala Gly Ala Gly Arg Gly Ala Asp Pro Arg
257 145 150 155 160
259 Val Pro Pro Ser Ser Pro Ala Thr Gln Val Cys Phe Glu Glu Pro Gln
260 165 170 175
262 Pro Ser Thr Ser Thr Ser Asp Leu Phe Pro Thr Ala Ser Ala Ser Ser
263 180 185 190
265 Thr Glu Pro Ser Pro Ala Gly Arg Glu Arg Ser Ser Ser Cys Gly Ser
266 195 200 205
268 Gly Gly Gly Gly Ile Ser Pro Lys Gly Ser Gly Pro Ser Val Ala Ser
269 210 215 220

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/048,046

DATE: 02/13/2002

TIME: 09:11:32

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

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271 Asp Glu Val Ser Ser Phe Ala Ser Ala Leu Pro Asp Arg Lys Thr Ala
272 225                230                235                240
274 Ser Phe Ser Ser Leu Glu Pro Gln Asp Gln Glu Asp Leu Glu Pro Val
275                245                250                255
277 Lys Lys Lys Met Arg Gly Asp Gly Asp Leu Asp Leu Asn Gly Gln Leu
278                260                265                270
280 Leu Val Ala Gln Pro Arg Arg Asn Ala Gln Thr Val His Glu Asp Val
281                275                280                285
283 Arg Ala Ala Ala Gly Lys Pro Asp Lys Met Glu Glu Thr Leu Thr Cys
284 290                295                300
286 Ile Ile Cys Gln Asp Leu Leu His Asp Cys Val Ser Leu Gln Pro Cys
287 305                310                315                320
289 Met His Thr Phe Cys Ala Ala Cys Tyr Ser Gly Trp Met Glu Arg Ser
290                325                330                335
292 Ser Leu Cys Pro Thr Cys Arg Cys Pro Val Glu Arg Ile Cys Lys Asn
293                340                345                350
295 His Ile Leu Asn Asn Leu Val Glu Ala Tyr Leu Ile Gln His Pro Asp
296                355                360                365
298 Lys Ser Arg Ser Glu Glu Asp Val Gln Ser Met Asp Ala Arg Asn Lys
299 370                375                380
301 Ile Thr Gln Asp Met Leu Gln Pro Lys Val Arg Arg Ser Phe Ser Asp
302 385                390                395                400
304 Glu Glu Gly Ser Ser Glu Asp Leu Leu Glu Leu Ser Asp Val Asp Ser
305                405                410                415
307 Glu Ser Ser Asp Ile Ser Gln Pro Tyr Val Val Cys Arg Gln Cys Pro
308                420                425                430
310 Glu Tyr Arg Arg Gln Ala Ala Gln Pro Pro His Cys Pro Ala Pro Glu
311                435                440                445
313 Gly Glu Pro Gly Ala Pro Gln Ala Leu Gly Asp Ala Pro Ser Thr Ser
314 450                455                460
316 Val Ser Leu Thr Thr Ala Val Gln Asp Tyr Val Cys Pro Leu Gln Gly
317 465                470                475                480
319 Ser His Ala Leu Cys Thr Cys Cys Phe Gln Pro Met Pro Asp Arg Arg
320                485                490                495
322 Ala Glu Arg Glu Gln Asp Pro Arg Val Ala Pro Gln Gln Cys Ala Val
323                500                505                510
325 Cys Leu Gln Pro Phe Cys His Leu Tyr Trp Gly Cys Thr Arg Thr Gly
326                515                520                525
328 Cys Tyr Gly Cys Leu Ala Pro Phe Cys Glu Leu Asn Leu Gly Asp Lys
329 530                535                540
331 Cys Leu Asp Gly Val Leu Asn Asn Asn Ser Tyr Glu Ser Asp Ile Leu
332 545                550                555                560
334 Lys Asn Tyr Leu Ala Thr Arg Gly Leu Thr Trp Lys Asn Met Leu Thr
335                565                570                575
337 Glu Ser Leu Val Ala Leu Gln Arg Gly Val Phe Leu Leu Ser Asp Tyr
338                580                585                590
340 Arg Val Thr Gly Asp Thr Val Leu Cys Tyr Cys Cys Gly Leu Arg Ser
341                595                600                605
343 Phe Arg Glu Leu Thr Tyr Gln Tyr Arg Gln Asn Ile Pro Ala Ser Glu

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VERIFICATION SUMMARY

DATE: 02/13/2002

CLIENT APPLICATION: US/10/048,046

TIME: 07:11:33

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

L:12 M:270 C: Current Application Number differs, Replaced Application Number

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date